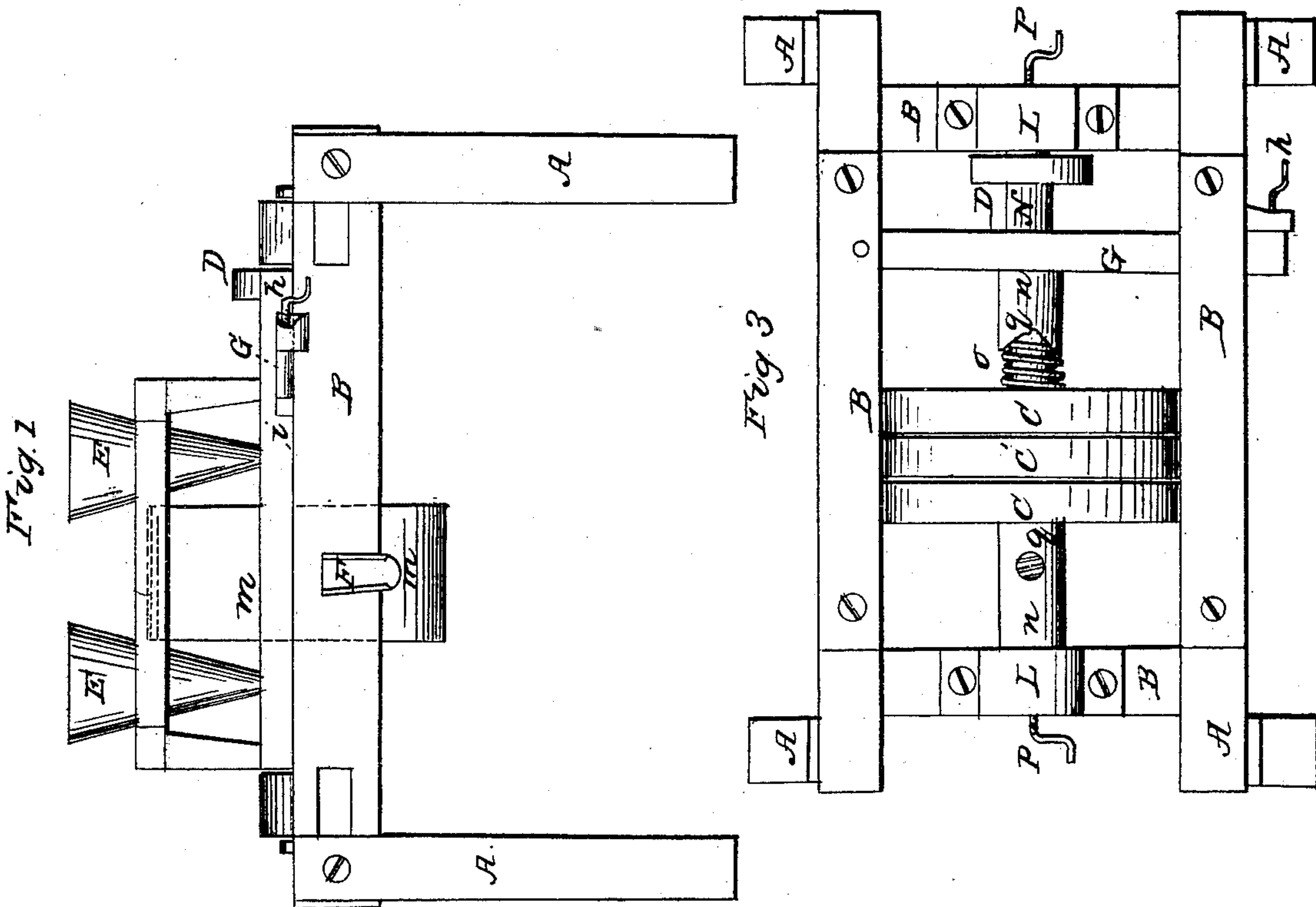
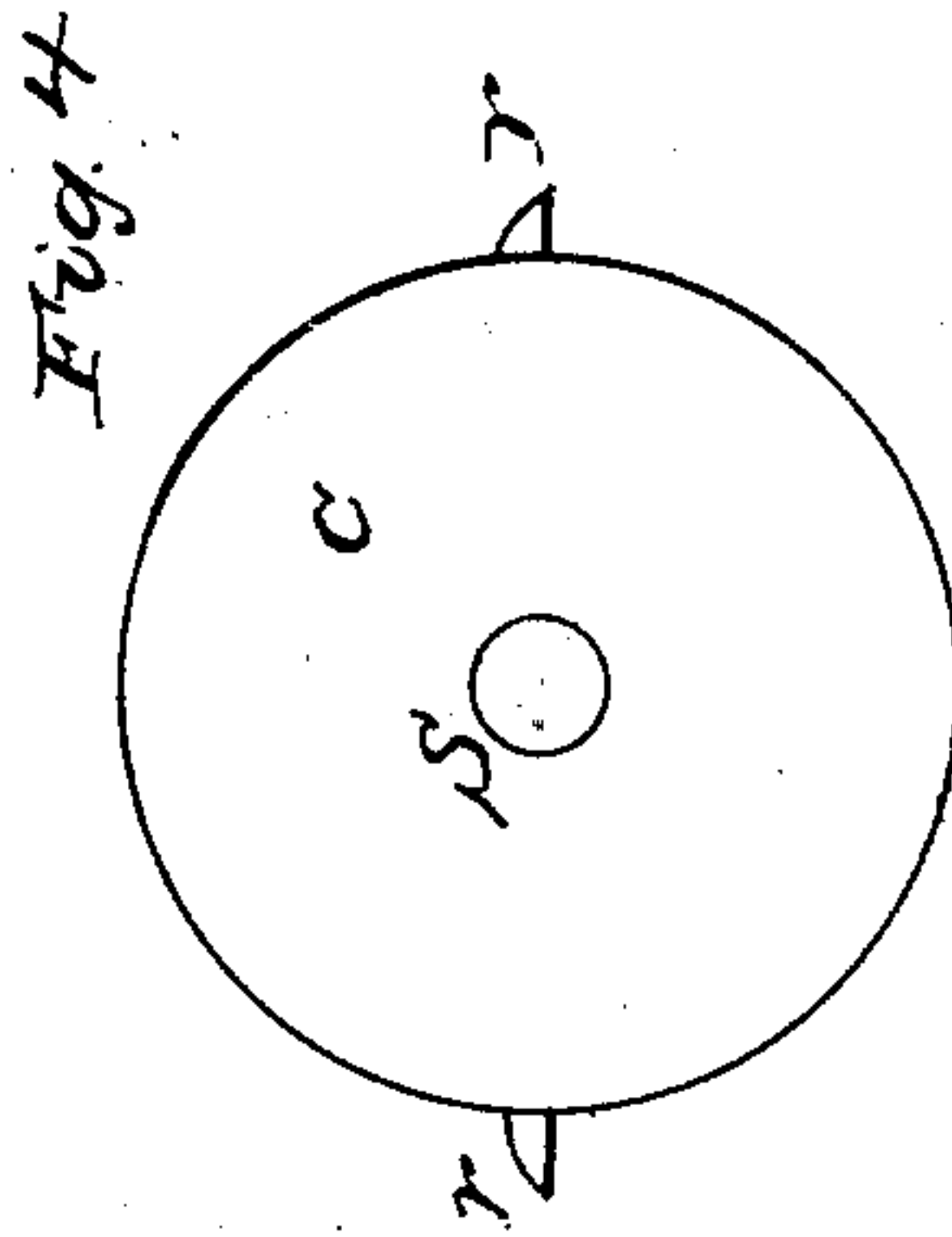
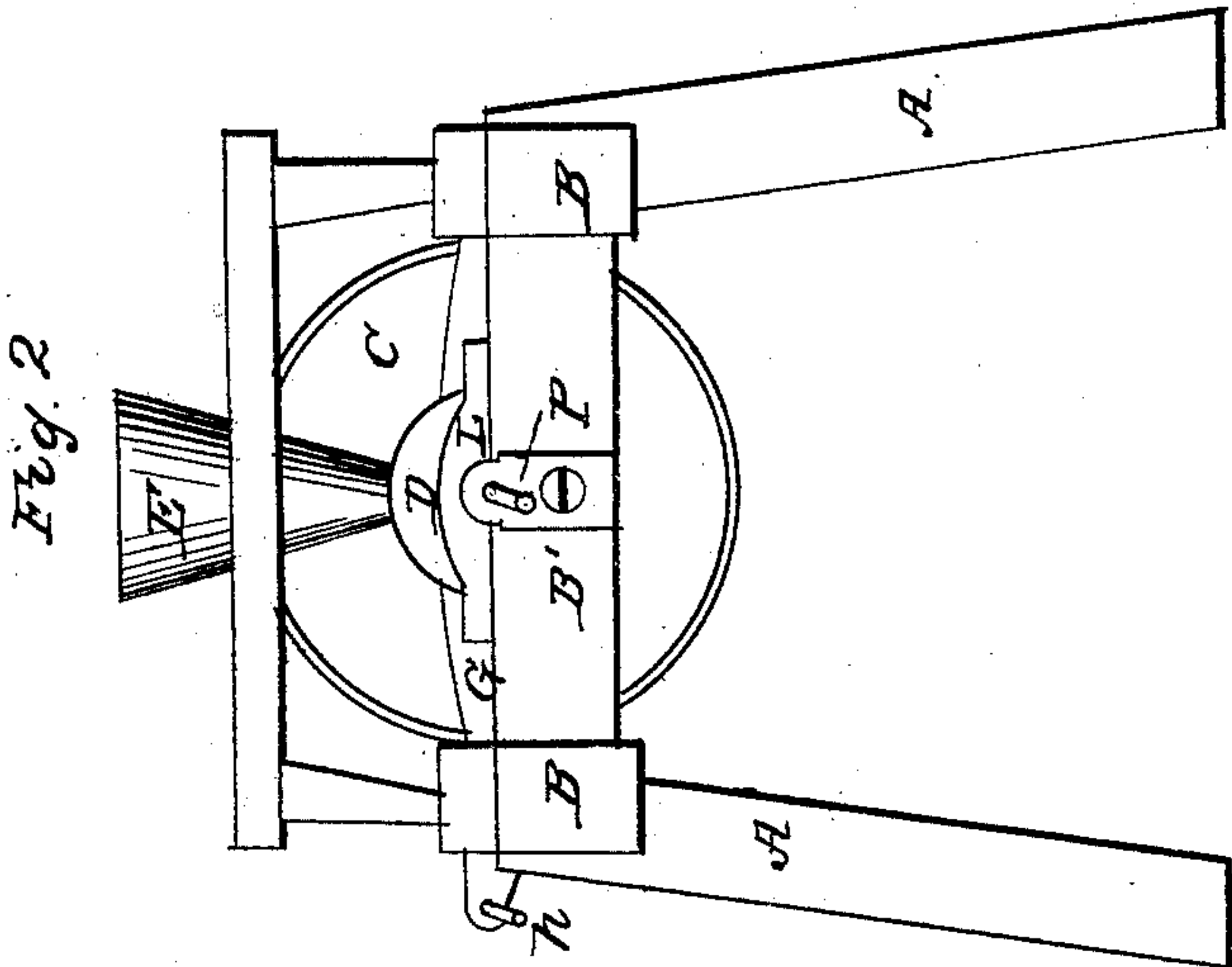


J. R. MORRISON.
Grinding Mill.

No. 18,923.

Patented Dec. 22, 1857.



UNITED STATES PATENT OFFICE.

J. R. MORRISON, OF EAST SPRINGFIELD, OHIO.

GRINDING-MILL.

Specification of Letters Patent No. 18,923, dated December 22, 1857.

To all whom it may concern:

Be it known that I, Jno. R. MORRISON, of East Springfield, Ohio, have invented certain new and useful Improvements in Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement and dress of the stones together with certain devices for regulating them and feeding the grain to them, the peculiarities of which will be hereinafter fully described.

In order that others skilled in the arts may manufacture and use my invention I will proceed to describe its construction and operation.

In the accompanying drawings which make a part of this specification Figure 1 is a side elevation; Fig. 2 is an end elevation; Fig. 3 is a plan view; Fig. 4 is a view of the stones, C C showing the means by which they are attached to the frame.

In Fig. 1 (A) are the legs of the stand; B, the frame; M, the band encircling the stones. E, represent hoppers into which the grain is received. D, is a pulley or drum on the main shaft, which drives the stone. G, is a lever, and *h*, is a screw for operating said lever in the space, *i*. F, is the spout leading from the stones.

In Fig. 2, (A) are the legs; B, the frame; E, the hopper. C, is one of the stationary stones; D, drum on the main shaft, for driving the running stone. P, is a temper screw for regulating the main shaft. G is a lever, and *h*, the screw for operating said lever.

In Fig. 3 (A), are the legs and B the frame. N, is a horizontal shaft, resting on the frame B, and passing through the stones C C and C'. (C) are two stationary stones resting on small cleats or pins, and are attached to the frame, B, thereby. C' is the running stone which is secured firmly to the shaft, and turns with it, said stone being dressed on both sides to correspond with the dress on each of the stationary stones, C. (*n*, *n'*) are sleeves lipping over the shaft N. (*o*), represent right and left spiral screws on the shaft N, and within the sleeves (*n*, *n'*) for the purpose of conveying and feeding, the grain to the stones. P, are temper screws for the purpose of regulating the shaft N. G, is a lever, through which the

shaft N passes, pressing against one end of the sleeve (*n'*) and thus by means of the other end of said sleeve pressing against the stone C, the pressure of stone C against the runner C' is regulated. (*h*) is a screw for the purpose of operating lever G.

In Fig. 4 C, is the stone and (2) are the cleats or pins which attach it to the frame B. These cleats or pins work in a small slot in the frame to allow of the adjustability of the stones.

In the operation of this invention the grain passes down through the hoppers, to the apertures in the sleeves (*n n'*) and is then carried between the sleeves and the shaft, N, to the eye of the stones by means of the right and left spiral feeders, *o*. The advantages of these feeders will be readily perceived in grinding rough uncleaned grain to be used for cattle or horse feed, as it is impossible for them to choke. The grain passes through the stones C, and drops on both sides of the runner C', between said runner and the stationary stones C, where it is ground, either fine or coarse as it may be desired.

It will be perceived that by operating the temper screws, P, unscrewing one, and screwing up the other, the position of the runner C', which is firmly attached to the shaft N, will be changed approaching either of the stationary stones as may be desired by the operator. One of the stones may be most readily changed or adjusted by the use of the screw, *h*, and lever G pressing up the sleeve, *n'*, against stone C', which is thus made to approach C'. It will be seen that the pressure will be equalized by the two grinding surfaces on each side and that there will be no friction caused by the use of the temper screws, P.

By the use of three stones in the manner described, we gain a saving of one stone, one shaft, and all the necessary gearing for another mill, at the same time being more convenient and occupying less space.

It is evident that by this arrangement I will be able to grind either two kinds of grain, making meal and flour at the same time, or flour and feed stuff, or meal and feed stuff as may be desired, or I may grind only one kind of grain and use only one side of the stone.

The runner is to be dressed on both sides either alike, or in any desirable manner and the two corresponding stationary stones

to be dressed only on one side and those sides to correspond with the runner.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent, is—

1. I claim hanging the bed stones C, C, on cleats or pins (*r*, *r*) and operating said stones by means of said pins in slots, or grooves, in the frame for the purpose of adjusting the stones as herein set forth and described.

2. I claim the combination and arrangement of the lever G, screw (*h*) and sleeve

(*n'*) with the stones C, C, when arranged and operated as set forth and for the purpose described. 15

3. I claim the arrangement of the runner C', between two bed stones C, C, when said runner has a flouting dress on one side, and a chop dress on the other, for the purpose of grinding different kinds of grain and feed at the same time, as herein set forth. 20

JOHN R. MORRISON.

Witnesses:

JOHN GRUBER,
HENRY PICK.